

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of :  
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Yasushi SAYAMA et al. :  
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Serial No. 10/720,488 : Group Art Unit: 3763  
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Filed: November 25, 2003 : Examiner: Melanie Jo HAND  
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Attn: BOARD OF PATENT APPEALS AND INTERFERENCES

**APPELLANT'S BRIEF UNDER 37 C.F.R. § 41.37(c)**

This brief is in furtherance of the Notice of Appeal, filed in this case on April 9, 2007.

The fees required under § 41.20 and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

Only one copy of this brief is required under § 41.37.

This brief contains these items under the following headings, and in the order set forth below (37 C.F.R. § 41.37(c)):

- I. Real Party in Interest.
- II. Related Appeals and Interferences.
- III. Status of Claims.
- IV. Status of Amendments.
- V. Summary of Claimed Subject Matter.
- VI. Grounds of Rejection to be Reviewed on Appeal.
- VII. Argument.
- VIII. Claims Appendix.
- IX. Evidence Appendix.
- X. Related Proceedings Appendix.

The final page of this brief bears the attorney's signature.

**I. REAL PARTY IN INTEREST**

The real party in interest in this appeal is UNI-CHARM CORPORATION of 182 Shimobun, Kinsei-cho, Shikokuchuo-shi, Ehime-ken, Japan.

**II. RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal.

**III. STATUS OF CLAIMS**

**A. Total Number of Claims in Application**

There is a total of 20 claims in the application, which are identified as claims 2-21.

**B. Status of all the claims**

1. Claims cancelled: claim 1
2. Claims withdrawn from consideration but not cancelled: none
3. Claims pending: claims 2-21
4. Claims allowed: none
5. Claims rejected: claims 2-21

**C. Claims on Appeal**

Claims on appeal are claims 2-21 as rejected by the Final Office Action dated January 9, 2007.

**IV. STATUS OF AMENDMENTS**

No Amendment has been filed in response to the Final Office Action.

**V. SUMMARY OF CLAIMED SUBJECT MATTER**

For the purpose of this appeal brief only, the claimed subject matter will be explained herein below with references to the specification by page and line number, and to the drawings by reference characters.

The invention of **independent claim 4** is directed to an open-type disposable diaper (FIGs. 1-2 and 4 at 1) configured by a front waist region (FIGs. 2 and 4 at 6), a rear waist region (FIGs. 2 and 4 at 7) and a crotch region (FIGs. 2 and 4 at 8) extending between said front and rear waist regions. Said front and rear waist regions (6, 7) have a body facing surface (FIG. 1 at 2) and an undergarment facing surface (FIGs. 1, 2 and 4 at 3) opposed to said body facing surface. Said diaper is contoured by front and rear end zones (FIGs. 2 and 4 at 11) extending in parallel to each other in a waist-surrounding direction (the horizontal direction in FIGs. 2 and 4), and transversely opposite lateral zones (FIGs. 2 and 4 at 12) extending in parallel to each other in back-and-forth direction (the vertical direction in FIGs. 2 and 4) crossing said waist-surrounding direction. Said transversely opposite lateral zones (12) in one of said front and rear waist regions (6, 7) are formed with first wings (FIGs. 2 and 4 at 18) extending in said waist-surrounding direction. Said first wings (18) are respectively provided on said body facing surface (2) with first fastener means (FIGs. 2 and 4 at 23) and said undergarment facing surface (3) in the other of said front and rear waist regions (7, 6) being provided with second fastener means (FIG. 1 at 24, FIG. 4 at 26) on which said first fastener means (23) may be detachably anchored (FIG. 3 at 22-24).

Said first wings (18) are elastically stretchable in said waist-surrounding direction (page 15, lines 3-4). Said undergarment facing surface (3) in said other waist region (7, 6) is provided in a vicinity of said second fastener means (24) with anti-slip zones (FIGs. 2 and 4 at 44) each adapted to come in contact (FIG. 3 at the interface between 44 and 62) with said body facing surface of said wings (18) and to exhibit an average kinetic frictional force of 0.5 N or higher under a load of 58.23 g/9 cm<sup>2</sup> and an average kinetic frictional force of 5 N or lower under a load of 340 g/9 cm<sup>2</sup> (the paragraphs bridging pages 5-6, pages 15-16 and FIG.

5) relative to said body facing surface as said first fastener means (23) being anchored on said second fastener means (24).

Elastic fibers made of a plastic elastomer and having a fiber length of 5 to 100 mm (page 13, lines 16-18) are mixed (page 11, lines 8-20) with inelastic fibers made of a thermoplastic material having a fiber length of 5 to 100 mm in said anti-slip zones (44).

The first and second fastener means are disclosed in an embodiment of the specification to include a hook member and a loop member of a "Velcro" type fastener (page 8, lines 3-14). In a further embodiment, the first fastener means include a pressure-sensitive adhesive and the backsheet (33) defining the undergarment facing surface (3) serves as the second fastener means (the paragraph bridging pages 18-19).

The invention of **independent claim 11** is directed to a disposable diaper (FIGs. 1-2 and 4 at 1), comprising: a main portion (FIGs. 2 and 4 at 6/7/8) comprising a front waist region (FIGs. 2 and 4 at 6), a rear waist region (FIGs. 2 and 4 at 7), and a crotch region (FIGs. 2 and 4 at 8), extending in a longitudinal direction (the vertical direction in FIGs. 2 and 4) of said diaper (1) between said front and rear waist regions (6, 7). Said main portion (6/7/8) further comprises an inner surface (FIG. 1 at 2) adapted to face a wearer in use and an outer surface (FIGs. 2 and 4 at 3) adapted to face away from the wearer in use.

A pair of wing portions (FIGs. 2 and 4 at 18) extend outwardly in a transverse direction (the horizontal direction in FIGs. 2 and 4) of said diaper from transversely opposite sides (FIGs. 2 and 4 at 12) of said main portion (6/7/8) in one of said waist regions (6, 7). Each of said wing portions (18) comprises an inner surface (FIG. 3 at 62) adapted to face the wearer in use and an outer surface (FIG. 3 at 61) adapted to face away from the wearer in use. Each of said wing portions (18) further comprises a distal end (near reference numeral 21 in FIG. 2) and a proximal end (near reference numeral 11 in FIG. 2) which is closer to the respective one of the transversely opposite sides (12) of said main portion (6/7/8) than the distal end.

Fastening elements (FIGs. 2 and 4 at 23) are on the inner surfaces and at the distal ends of said wing portions (18). The proximal ends of said wing portions (18) are free (FIGs. 1, 2 and 4) of said fastening elements (23).

A landing zone (FIGs. 1, 2 and 4 at 26) is on the outer surface (3) of said main portion (6/7/8) in the other of said waist regions (7, 6). Said fastening elements (23) are releasably attachable to said landing zone (26) for attaching said waist regions (3, 7) together (FIG. 3 at 22-24).

Antislip zones (FIGs. 2 and 4 at 44) are on the outer surface (3) of said main portion (6/7/8) in the other (7, 6) of said waist regions and on opposite sides (FIGs. 2, 4) of said landing zone (26). Said antislip zones (44) are contactable with predetermined areas (FIG. 3, near reference numeral 44) of the inner surfaces (FIG. 3 at 62) of the proximal ends of said wing portions (18), when said wing portions (18) are attached to said landing zone (26), to resist relative movement (page 19, lines 11-14, and page 11, lines 14-20) between the predetermined areas of the proximal ends of said wing portions (18) and the other of said waist regions (7, 6).

The antislip zones (44) comprise a mixture of elastic fibers made of a plastic elastomer and inelastic fibers made of a thermoplastic material (page 11, lines 8-20).

The invention of **independent claim 13** is directed to a disposable diaper (FIGs. 1-2 and 4 at 1), comprising: a main portion (FIGs. 2 and 4 at 6/7/8) comprising a front waist region (FIGs. 2 and 4 at 6), a rear waist region (FIGs. 2 and 4 at 7), and a crotch region (FIGs. 2 and 4 at 8), extending in a longitudinal direction (the vertical direction in FIGs. 2 and 4) of said diaper (1) between said front and rear waist regions (6, 7). Said main portion (6/7/8) further comprises an inner surface (FIG. 1 at 2) adapted to face a wearer in use and an outer surface (FIGs. 2 and 4 at 3) adapted to face away from the wearer in use.

A pair of wing portions (FIGs. 2 and 4 at 18) extend outwardly in a transverse direction (the horizontal direction in FIGs. 2 and 4) of said diaper from transversely opposite sides (FIGs. 2 and 4 at 12) of said main portion (6/7/8) in one of said waist regions (6, 7). Each of said wing portions (18) comprises an inner surface (FIG. 3 at 62) adapted to face the

wearer in use and an outer surface (FIG. 3 at 61) adapted to face away from the wearer in use. Each of said wing portions (18) further comprises a distal end (near reference numeral 21 in FIG. 2) and a proximal end (near reference numeral 11 in FIG. 2) which is closer to the respective one of the transversely opposite sides (12) of said main portion (6/7/8) than the distal end.

Fastening elements (FIGs. 2 and 4 at 23) are on the inner surfaces and at the distal ends of said wing portions (18). The proximal ends of said wing portions (18) are free (FIGs. 1, 2 and 4) of said fastening elements (23).

A landing zone (FIGs. 1, 2 and 4 at 26) is on the outer surface (3) of said main portion (6/7/8) in the other of said waist regions (7, 6). Said fastening elements (23) are releasably attachable to said landing zone (26) for attaching said waist regions (3, 7) together (FIG. 3 at 22-24).

Antislip zones (FIGs. 2 and 4 at 44) are on the outer surface (3) of said main portion (6/7/8) in the other (7, 6) of said waist regions and on opposite sides (FIGs. 2, 4) of said landing zone (26). Said antislip zones (44) are contactable with the inner surfaces (FIG. 3 at the interface between 62 and 44) of the proximal ends of said wing portions (18), when said wing portions (18) are attached to said landing zone (26).

Slip zones (FIG. 2 at 46) are on the outer surface (3) of said main portion (6/7/8) in the other (7, 6) of said waist regions. Each of said antislip zones (44) is positioned in said transverse direction between one of the slip zones (46) and the landing zone (26). Said slip zones (46) being also contactable (FIG. 3) with the inner surfaces of the proximal ends of said wing portions (18) when said wing portions (18) are attached to said landing zone (26).

A kinetic friction coefficient between the antislip zones (44) and the inner surfaces of the proximal ends of said wing portions (18) is greater than that between the slip zones (46) and the inner surfaces of the proximal ends of said wing portions (18).

Each of the antislip zones (44) comprises a fibrous mixture of elastic fibers and inelastic fibers (page 11, lines 8-20).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

### **A. First Ground of Rejection**

The rejection of claim 4 under the enablement of *35 U.S.C. 112, first paragraph*.

### **B. Second Ground of Rejection**

The rejection of claims 2-4, 6-11, 13-14, 16, 18-20 under *35 U.S.C. 103(a)* as being unpatentable over *Kline* in view of *Sherrod*.

### **C. Third Ground of Rejection**

The rejection of claims 5, 12, 15, 17, and 21 under *35 U.S.C. 103(a)* as being unpatentable over *Kline* in view of *Sherrod* and further in view of *Damberg*.

## **VII. ARGUMENT**

### **A. First Ground of Rejection**

*35 U.S.C. 112, first paragraph rejection of claim 4*

The Examiner rejected claim 4 under *35 U.S.C. 112, first paragraph* as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and/or use the claimed invention.

Appellant respectfully traverses this rejection because the Examiner has failed to follow proper USPTO procedure and practice.

In order to make a rejection, the examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. *In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993) (examiner must provide a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure) (emphasis added). See MPEP, section 2164.04.

The standard for determining whether the specification meets the enablement requirement was cast in the Supreme Court decision of *Mineral Separation v. Hyde*, 242 U.S. 261, 270 (1916) which postured the question: is the experimentation needed to practice the invention undue or unreasonable? The test of enablement is

not whether any experimentation is necessary, but whether, if experimentation is necessary, it is undue. *In re Angstadt*, 537 F.2d 498, 504, 190 USPQ 214, 219 (CCPA 1976) (emphasis added). *See MPEP*, section 2164.01.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is “undue.” These factors include, but are not limited to:

- (A) The breadth of the claims;
- (B) The nature of the invention;
- (C) The state of the prior art;
- (D) The level of one of ordinary skill;
- (E) The level of predictability in the art;
- (F) The amount of direction provided by the inventor;
- (G) The existence of working examples; and
- (H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

It is improper to conclude that a disclosure is not enabling based on an analysis of only one of the above factors while ignoring one or more of the others. The examiner's analysis must consider all the evidence related to each of these factors, and any conclusion of non-enablement must be based on the evidence as a whole. 858 F.2d at 737, 740, 8 USPQ2d at 1404, 1407 (emphasis added). *See MPEP*, section 2164.01(a).

The Examiner's *35 U.S.C. 112, first paragraph* rejection of claim 4 has failed to provide an analysis of at least factors (D) and (F). Applicants respectfully submit that the ordinary skill in the related art is sufficiently high to enable a skilled artisan to make and use the claimed invention without undue experimentation, based on at least the disclosure provided at the paragraph bridging pages 5-6 of the specification. The passage includes a definition of the term “average kinetic frictional force” that must be used in interpreting claim 4. The composition of the fibers have been set forth in claim 4, i.e., plastic elastomer and thermoplastic material.<sup>1</sup>

The above guideline and argument were presented in Appellant's Response dated September 20, 2006<sup>2</sup> to remind the Examiner of proper USPTO procedure and practice. The Examiner refused<sup>3</sup> to follow the guideline and maintained that the specification fails to enable the invention as claimed. Appellant respectfully disagrees, at least because the amount of direction provided by the specification<sup>4</sup> is sufficient and the level of one of ordinary skill in the

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<sup>1</sup> See also the specification at page 11, lines 8-20 and page 15, lines 3-16.

<sup>2</sup> See the September 20, 2007 Amendment at page 10, line 10 through page 11 line 20.

<sup>3</sup> See the January 9, 2007 Final Office Action at page 2, lines 5-19.

<sup>4</sup> See the specification at the paragraphs bridging pages 5-6 and pages 15-16 as well as page 11, lines 8-20 and page 15, lines 3-16.

art is also sufficient so as to enable the person of ordinary skill in the art to make and use the claimed invention without undue experimentation. It should be noted that the Examiner has not provided any explanation as to why experimentation, if necessary, is undue. It should further be noted that the Examiner has improperly alleged that “the values set forth in claim 4 do not produce a kinetic coefficient of friction that satisfies both ranges set forth in claim 4,”<sup>5</sup> without providing any explanation.

Accordingly, Appellant respectfully submits that the Examiner has not met her burden of showing why the scope of protection provided by a claim is not adequately enabled by the disclosure, and requests that the *35 U.S.C. 112, first paragraph* rejection of claim 4 be withdrawn.

#### **B. Second Ground of Rejection**

*35 U.S.C. 103(a) rejection of claims 2-4, 6-11, 13-14, 16, 18-20 as being unpatentable over Kline in view of Sherrod*

The Examiner rejected claims 2-4, 6-11, 13-14, 16, 18-20 under *35 U.S.C. 103(a)* as being unpatentable over *Kline* in view of *Sherrod*.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant’s disclosure. *See MPEP*, section 2143 quoting *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The rule is obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *See MPEP* 2143.01 quoting *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) (*emphasis added*); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

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<sup>5</sup> See January 9, 2007 Final Office Action at page 4, lines 8-9 from bottom.

Appellant respectfully traverses the rejection, at least because (i) the references are not properly combinable (first criterion) and/or (ii) the references combined in the manner proposed by the Examiner would fail to teach or disclose all limitations (third criterion) of, at least, the rejected independent claims.

With respect to (i), independent claim 4 recites "anti-slip zones each adapted to come in contact with said body facing surface of said wings and to exhibit an average kinetic frictional force of 0.5 N or higher under a load of 58.23 g/9 cm<sup>2</sup> and an average kinetic frictional force of 5 N or lower under a load of 340 g/9 cm<sup>2</sup> relative to said body facing surface as said first fastener means being anchored on said second fastener means." Independent claim 11 recites "antslip zones on the outer surface of said main portion in the other of said waist regions and on opposite sides of said landing zone, said antislip zones being contactable with predetermined areas of the inner surfaces of the proximal ends of said wing portions, when said wing portions are attached to said landing zone, to resist relative movement between the predetermined areas of the proximal ends of said wing portions and the other of said waist regions." Independent claim 13 recites "antslip zones on the outer surface of said main portion in the other of said waist regions and on opposite sides of said landing zone, said antislip zones being contactable with the inner surfaces of the proximal ends of said wing portions when said wing portions are attached to said landing zone." Thus, the claimed antislip zones are arranged for contacting and resisting relative movement between components of the diaper.

In contrast, the *Sherrod* skid-resistant coating is arranged to contact with external objects to maintain the garment in use. This is evident from the *Sherrod* disclosure that a skid-resistance coating (30, FIG. 2) is applied to the exterior surface (42) of a bottom sheet to improve the ability of the absorbent article (FIG. 1) to remain in position.<sup>6</sup> Thus, the references are not combinable to provide the *Sherrod* skid-resistant coating in regions where components of the *Kline* diaper contact each other in the presently claimed manner. It might have been obvious, if at all, to apply the *Sherrod* skid-resistant coating only to the portion of the

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<sup>6</sup> See for example, *Sherrod* at Abstract, paragraphs 0001-0002, especially paragraph 0016 lines 8-9, i.e., "bed sheet" (external object).

*Kline* backsheet that is contactable with external objects. It would not have been obvious to apply the *Sherrod* skid-resistant coating in regions arranged for contact between internal parts of the diaper. Thus, the applied references are not properly combinable in the manner proposed by the Examiner.

The Examiner's response <sup>7</sup> to the above argument is noted. Applicants respectfully disagree with the Examiner's position, because the fact is that *Sherrod* does not teach or suggest to arrange the anti-skid coating in regions where the anti-skid coating is contactable with other parts of the diaper. The primary purpose of *Sherrod* is to prevent relative movement between the diaper and the wearer's garment. Thus, a person of ordinary skill in the art would understand that to arrange the *Sherrod* anti-skid coating in regions where it can only contact other parts of the diaper would not serve the primary purpose of the *Sherrod* reference. Therefore, the person of ordinary skill in the art would have not considered to arrange the *Sherrod* anti-skid coating in such regions of the *Kline* diaper and would not have been motivated to combine the references as proposed by the Examiner.

Of particular note, the Examiner's allegation that "*Sherrod* teaches coating a bottom sheet 28 with an anti-skid coating over substantially all of said sheet" <sup>8</sup> is incorrect. *Sherrod* does not teach such, as can be seen, for example, at 30 in Fig. 2 of the reference.

With respect to (ii), independent claims 4, 11 and 13 recite, among other things, that the antislip zones comprise a mixture of elastic fibers and inelastic fibers. *Sherrod* fails to teach or suggest fibrous antislip zones because the reference only discloses a coating.

A person of ordinary skill in the art would understand from the disclosure in paragraphs [0040], [0041] and [0042] of *Sherrod* that the materials to be used in forming the *Sherrod* skid-resistant coating must be coatable, that is, the materials must be fluidized and have a latex- or emulsion- or liquid-like type. This is also evident from paragraph [0030] in which *Sherrod* states "[t]he material suitable for the coating 30 can be any latex and hot-melt." Accordingly, a person of ordinary skill in the art would recognize that the *Sherrod* skid-resistant coating does not comprise any fibers and, hence, is structurally different from

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<sup>7</sup> See the January 9, 2007 Final Office Action at page 3, lines 1-9.

<sup>8</sup> See the January 9, 2007 Final Office Action at page 5, lines 4-5 from bottom.

the anti-slip zones in the claimed invention which is defined by a fibrous mixture of elastic fibers and inelastic fibers. Thus, the Examiner's proposed combination of *Sherrod* and *Kline*, if proper, would still lack the claimed anti-slip zones made of a fibrous mixture.

The Examiner's response <sup>9</sup> to the above argument is noted. Applicants respectfully disagree with the Examiner's position, because the fact is that *Sherrod* does not teach or suggest any fibrous anti-skid zone. The reference only discloses a coating which, as argued above, has no fibrous nature.

The Examiner's reliance on *Kline* at column 5 lines 14-17 <sup>10</sup> is misplaced, because the cited portion is related to the backsheet rather than to an anti-skid coating. A person of ordinary skill in the art would further understand that in the Examiner's proposed *Kline/Sherrod* combination (if proper), the backsheet of *Kline* would be covered by the anti-skid coating of *Sherrod* and would not be "adapted to come in contact with said body facing surface of said wings" as required by independent claim 4 or "contactable with predetermined areas of the inner surfaces of the... wing portions" as required by independent claims 11 and 13.<sup>11</sup> Thus, the portions of the backsheet of *Kline* that underlie the *Sherrod* antiskid coating do not meet the definition of the claimed anti-slip zone. The claimed anti-slip zone corresponds, if at all, solely to the coating of *Sherrod* which has no fibrous nature.

The Examiner's reliance on *Sherrod*'s reference to *McCormick* (U.S. Patent No. 6,075,179)<sup>12</sup> is also misplaced, because *Sherrod* refers to *McCormick* for a disclosure of materials suitable for bottom-sheet or backsheet 28.<sup>13</sup> Thus, as argued immediately above with respect to the teaching of *Kline* at column 5 lines 14-17, the *McCormick* teachings do not define any anti-slip zone and cannot be considered as evidence that it was known in the prior art to provide fibrous anti-slip zones.

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<sup>9</sup> See the January 9, 2007 Final Office Action at page 3, lines 15-17.

<sup>10</sup> See the January 9, 2007 Final Office Action at page 3, lines 10-19.

<sup>11</sup> See independent claim 4 at lines 7-8 from bottom, independent claim 11 at lines 5-6 from bottom, and independent claim 13 at lines 18-19.

<sup>12</sup> See the January 9, 2007 Final Office Action at page 3, lines 17-19.

<sup>13</sup> See *Sherrod* at paragraph [0034].

For *any* of the reasons (i) and (ii) presented above, Applicants respectfully submit that the obviousness rejection of all pending independent claims, as well as the respective dependent claims, is clearly erroneous and should be withdrawn.

Claim 4

The Examiner's "optimization" argument<sup>14</sup> with respect to claim 4 is traversed for the following reason.

A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation." *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

The Examiner argued that *Sherrod* provides evidence that the art, prior to the present invention, recognized the claimed kinetic frictional force as a result-effective variable. Appellant respectfully disagrees, because the kinetic frictional forces recited in claim 4 are the frictional forces between two components of the diaper, whereas the *Sherrod* kinetic frictional forces or coefficients are the frictional forces or coefficients between the bottom sheet of the diaper with an external object, such as a bed sheet or cotton fabric material.<sup>15</sup> The prior art's disclosed frictional forces or coefficients between the diaper and an external object are neither related to nor suggestive of the claimed frictional forces between two components of the diaper. The prior art teachings do not serve as evidence that the claimed frictional forces between two components of the diaper were art-recognized result-effective variables. Therefore, it would not have been obvious to have optimized the *Sherrod* frictional forces (or coefficients) between the bottom sheet of the diaper with an external object to arrive at the claimed invention.

Accordingly, claim 4 is separately patentable, and does not stand or fall together with other claims.

Claim 6

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<sup>14</sup> See the January 9, 2007 Final Office Action at page 7, line 4 from bottom through page 8 line 5.

<sup>15</sup> See *Sherrod* at paragraph 0016 lines 8-9, i.e., "bed sheet" (external object), as well as paragraph 70.

The 35 U.S.C. 103(a) rejection of claim 6 is traversed, because the applied references fail to teach or suggest that “a weight ratio of said elastic fibers and inelastic fibers in each said anti-slip zone is in a range of 8:2 to 5:5.”

The Examiner alleged that *Sherrod* teaches a coating that contains copolymers (i.e., 1:1 or 5:5 weight ratio for the block components,<sup>16</sup> without specifying where such teaching might be found. Appellant has carefully reviewed the *Sherrod*, but found no teaching of any weight ratio. The rejection is therefore improper as being evidentially unsupported.<sup>17</sup>

Further, the claimed weight ration is for elastic and inelastic fibers and cannot be met by a weight ratio, if any, for copolymers in the *Sherrod* non-fibrous coating.

Accordingly, claim 6 is separately patentable, and does not stand or fall together with other claims.

#### Claim 8

The 35 U.S.C. 103(a) rejection of claim 8 is traversed, because the applied references fail to teach or suggest that “said inelastic fiber and said sheet material, which is the nonwoven fabric, contain thermoplastic material having substantially the same melting points.”

The Examiner’s argument<sup>18</sup> regarding claim 8 is not understood. Appellant respectfully submits that there is no teaching in *Sherrod* that the fibers of the melt-blown bottom sheet 28 and the material of the anti-skid coating 30 have substantially the same melting points.

Further, the melting point of the claimed inelastic fibers and cannot be met by a melting point of any copolymer in the *Sherrod* non-fibrous coating.

Accordingly, claim 8 is separately patentable, and does not stand or fall together with other claims.

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<sup>16</sup> See the January 9, 2007 Final Office Action at page 8 the first full paragraph.

<sup>17</sup> See also the Examiner’s admission in the January 9, 2007 Final Office Action at page 11, lines 6-7.

Claim 11

The Examiner's argument<sup>19</sup> regarding claim 11 is improper, because the fastening system 40 of *Kline* which includes fastening elements 48/49 is not readable on the claimed anti-slip zones and corresponding proximal ends of the wing portions which are defined in claim 11 to be outside of the fastening elements and landing zone.

At the very least, the claimed anti-slip zones, as defined in independent claim 11, are arranged on opposite sides of the landing zone and cannot be regarded as the reference's landing zone 49. Further, the Examiner's allegation that *Kline* teaches creating anti-slip zones near fastening element 49 is evidentially unsupported. *Kline* does not teach such, and hence, fails to teach or suggest any anti-slip zones on opposite sides of the landing zone 49, contrary to the presently claimed invention.

Accordingly, claim 11 is separately patentable, and does not stand or fall together with other claims.

Claim 13

The 35 U.S.C. 103(a) rejection of claim 13 is erroneous, because the Examiner has failed to specify how the *Kline* teaches or suggests the claim limitation that "a kinetic friction coefficient between the antislip zones and the inner surfaces of the proximal ends of said wing portions is greater than that between the slip zones and the inner surfaces of the proximal ends of said wing portions."

It should be noted that *Kline* does not teach any anti-slip zones on opposite sides of the landing zone 49, as discussed above with respect to claim 11.

Even if it is proper, which Applicants contend to the contrary, to construe the outer edges of the *Kline* landing zone 49 as anti-slip zones and the regions immediately outside the landing zone 49 as slip zones, there is no evidence in *Kline* that such anti-slip/slip zones would meet the

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<sup>18</sup> See the January 9, 2007 Final Office Action at page 8 the last full paragraph.

<sup>19</sup> See the January 9, 2007 Final Office Action at page 9, especially lines 1-11 from bottom.

kinetic friction coefficient requirement of claim 13. In other words, there is no evidence in *Kline* that the proximal ends (e.g., 67 in FIG. 1) of the lower wings (30) have greater kinetic friction coefficients with the outer edges of the *Kline* landing zone (49) than with the regions immediately outside the landing zone 49.

It should be noted that the retaining material 14 in FIG. 1 of *Kline* is not readable on the claimed proximal ends of the wing portions, because the proximal ends of the wing portions are defined in independent claim 13 to be different from the distal ends of the wing portions fastener where the fastening elements are provided.

Accordingly, claim 13 is separately patentable, and does not stand or fall together with other claims.

Claims 16, 19 and 20

The Examiner's argument<sup>20</sup> regarding claim 16 is improper, because the Examiner has failed to specify how *Kline* teaches or suggests any strip members attached to the main portion, as presently claimed. The Examiner has only discussed how the reference allegedly teaches anti-slip and lip zones. The discussion is also unclear as to what the first and second regions are.

A *prima facie* case of obviousness has not been properly established.

Claims 19-20 include similar "strip member" limitations and, hence, have been improperly rejected.

Accordingly, claims 16, 19 and 20 are separately patentable, and do not stand or fall together with other claims.

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<sup>20</sup> See the January 9, 2007 Final Office Action at page 10 the third full paragraph.

### C. Third Ground of Rejection

*35 U.S.C. 103(a) rejection of claims 5, 12, 15, 17, and 21 as being unpatentable over Kline in view of Sherrod and Damberg*

The Examiner rejected claims 5, 12, 15, 17, and 21 under *35 U.S.C. 103(a)* as being unpatentable over *Kline* in view of *Sherrod* and *Damberg*. Appellant respectfully traverses this rejection, because (iii) *Damberg* is not properly combinable with *Kline* and *Sherrod* and (iv) the reference also fails to teach or suggest the fibrous nature of the claimed anti-slip zone.

(iii) With respect to (iii), *Damberg* is non-analogous art<sup>21</sup> that cannot be combined with *Kline* and *Sherrod*. In particular, *Damberg* is not in the field of applicant's endeavor, because it belongs to a completely different field of search. Note, for example, that *Damberg* is classified in class 264 whereas *Kline* and *Sherrod* are classified in classes 604 and 442. *Damberg* would not have logically commanded itself to an inventor's attention in considering his problem in the diaper art, because the reference relates to molded parts<sup>22</sup> which are well known in the diaper art as being unusable in diapers due to their excessive strength and hardness.<sup>23</sup> Given the unrelatedness of *Damberg* to the diaper art and the inapplicability of the *Damberg* strong, hard molded products in diapers, a person of ordinary skill in the art would not have been motivated to combine *Damberg* with *Kline* or *Sherrod*, contrary to the Examiner's rationale.

(iv) With respect to (iv), *Damberg* fails to cure the deficiency of *Kline* and *Sherrod*, i.e., the *Sherrod* non-fibrous antiskid coating. *Damberg* discloses a process of

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<sup>21</sup> "In order to rely on a reference as a basis for rejection of an applicant's invention [under 35 U.S.C. 103(a)], the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 968 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) ("A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commanded itself to an inventor's attention in considering his problem."); and *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993). See MPEP, section 2141.01(a).

<sup>22</sup> See *Damberg* e.g., at Abstract, column 2 lines 39-42 and 52-57.

<sup>23</sup> See *Damberg* at column 5 lines 56-58.

producing parts from polymeric particles upon the application of heat and pressure.<sup>24</sup> The process disclosed in *Damberg* includes mixing, heating, pressing and curing.<sup>25</sup> A person of ordinary skill in the art would understand that the final products of *Damberg* will either maintain the particulate nature of the ingredients or have a film, molded structure. The final product of *Damberg* will not have a fibrous nature, unlike the claimed anti-slip zone. Therefore, even if *Damberg* could be properly combined with *Kline* and *Sherrod*, which Appellant contends to the contrary, the antiskid coating of the combined article would still fail to include the claimed fibrous anti-slip zone.

For any of the reasons (iii) and (iv) presented above, Applicants respectfully submit that the obviousness rejection of claims 5, 12, 15, 17 and 21 is clearly erroneous and should be withdrawn.

#### Claim 5

The rejection of claim 5 is traversed for the additional reasons presented with respect to claims 6 and 8.

The Examiner's additional reliance on *Damberg* does not cure the deficiency of *Kline* and *Sherrod* because the claimed weight ration and melting point are given for fibers, whereas the *Damberg* teachings relied on by the Examiner are given for particles.

Accordingly, claim 5 is separately patentable, and does not stand or fall together with other claims.

#### Claims 12 and 21

The rejection of claims 12 and 21 is traversed for the additional reasons presented with respect to claim 5.

The Examiner's allegation<sup>26</sup> that *Kline* teaches a thermoplastic film for said non-woven fabric of which PVC is an example is both inaccurate and evidentially unsupported. First, it is

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<sup>24</sup> See *Damberg* at Abstract, column 1 line 59, column 2 lines 1 and 7, column 3 lines 43-58, and the paragraph bridging columns 3-4.

<sup>25</sup> See *Damberg* at column 4 line 30 through column 5 line 19.

<sup>26</sup> See the January 9, 2007 Final Office Action at page 12, line 2.

unclear how a PVC film can be regarded as part of a non-woven fabric. Second, *Kline* does not teach using PVC to make fibers for a non-woven fabric.

Accordingly, Appellant respectfully submits that the applied references do not teach or suggest that “a plastic ingredient of said non-woven fabric is exactly the same as that of said inelastic fibers.”

Accordingly, claims 12 and 21 are separately patentable, and do not stand or fall together with other claims.

Claims 15 and 17

The rejection of claims 15 and 17 is traversed, because *Damberg*, contrary to the Examiner’s allegation does not teach or suggest that “the slip zones comprise said inelastic fibers and are free of said elastic fibers.” *Damberg* only teaches particles.

Accordingly, claims 15 and 17 are separately patentable, and do not stand or fall together with other claims.

Each of the Examiner's rejections has been traversed. Accordingly, Applicant respectfully submits that all claims on appeal are considered allowable. Accordingly, reversal of the Examiner's Final Rejection is believed appropriate and courteously solicited.

If for any reason this Appeal Brief is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned, Applicant's attorney of record.

Respectfully submitted,  
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**VIII. CLAIMS APPENDIX**

2. The disposable diaper according to claim 11, wherein said transversely opposite lateral zones in said crotch region are provided with leg elastic members extending further into said front and rear waist regions and said anti-slip zones are formed so as to cover parts of said leg elastic members or so as to lie on respective extensions of said leg elastic members in said longitudinal direction.

3. The disposable diaper according to claim 4, wherein said anti-slip zones are formed so as to be placed aside from said lateral zones toward a center line bisecting a width of said diaper;

said diaper further comprising, between respective said anti-slip zones and respective said lateral zones, slip-zones each exhibiting an average kinetic frictional force lower than said average kinetic frictional force exhibited by each of said anti-slip zones.

4. An open-type disposable diaper configured by a front waist region, a rear waist region and a crotch region extending between said front and rear waist regions, said front and rear waist regions having a body facing surface and an undergarment facing surface opposed to said body facing surface, said diaper being contoured by front and rear end zones extending in parallel to each other in a waist-surrounding direction and transversely opposite lateral zones extending in parallel to each other in back-and-forth direction crossing said waist-surrounding direction, said transversely opposite lateral zones in one of said front and rear waist regions being formed with first wings extending in said waist-surrounding direction, said first wings are respectively provided on said body facing surface with first fastener means and said undergarment facing surface in the other of said front and rear waist regions being provided with second fastener means on which said first fastener means may be detachably anchored, said disposable diaper further comprising:

said first wings being elastically stretchable in said waist-surrounding direction and said undergarment facing surface in said other waist region being provided in a vicinity of said second fastener means with anti-slip zones each adapted to come in contact with said body facing surface of said wings and to exhibit an average kinetic frictional force of 0.5 N or higher under a load of 58.23 g/9 cm<sup>2</sup> and an average kinetic frictional force of 5 N or lower under a load of 340 g/9 cm<sup>2</sup> relative to said body facing surface as said first fastener means being anchored on said second fastener means;

wherein elastic fibers made of a plastic elastomer and having a fiber length of 5 to 100 mm are mixed with inelastic fibers made of a thermoplastic material having a fiber length of 5 to 100 mm in said anti-slip zones.

5. The disposable diaper according to claim 11, wherein

said elastic fibers are continuous elastic fibers and said inelastic fibers are continuous inelastic fibers;

a weight ratio of said elastic fibers and inelastic fibers in each said anti-slip zone is in a range of 8:2 to 5:5;

said mixture of said elastic fibers and inelastic fibers is bonded to a nonwoven fabric that defines the outer surface of said main portion in the other of said waist regions; and

said inelastic fiber and said nonwoven fabric contain thermoplastic materials having substantially the same melting points.

6. The disposable diaper according to claim 4, wherein a weight ratio of said elastic fibers and inelastic fibers in each said anti-slip zone is in a range of 8:2 to 5:5.

7. The disposable diaper according to claim 6, wherein said anti-slip zone comprises a mixture of said elastic fibers and inelastic fibers bonded to a sheet material which is any one of a nonwoven fabric, a woven fabric and a film.

8. The disposable diaper according to claim 7, wherein said inelastic fiber and said sheet material, which is the nonwoven fabric, contain thermoplastic material having substantially the same melting points.

9. The disposable diaper according to claim 4, wherein said lateral zones are partially broadened in said waist-surrounding direction to form second wings in said other waist region and said anti-slip zones are formed so as to be placed aside from distal end portions of said second wings toward said center line bisecting the width of said diaper.

10. The disposable diaper according to claim 9, wherein said second wing is provided in a zone placed aside to said distal end portion with a slip-zone having said average kinetic frictional force lower than that of said anti-slip zone.

11. A disposable diaper, comprising:

a main portion comprising a front waist region, a rear waist region and a crotch region extending in a longitudinal direction of said diaper between said front and rear waist regions, said main portion further comprising an inner surface adapted to face a wearer in use and an outer surface adapted to face away from the wearer in use;

a pair of wing portions extending outwardly in a transverse direction of said diaper from transversely opposite sides of said main portion in one of said waist regions, each of said wing portions comprising an inner surface adapted to face the wearer in use and an outer surface adapted to face away from the wearer in use, each of said wing portions further comprising a distal end and a proximal end which is closer to the respective one of the transversely opposite sides of said main portion than the distal end;

fastening elements on the inner surfaces and at the distal ends of said wing portions, the proximal ends of said wing portions being free of said fastening elements;

a landing zone on the outer surface of said main portion in the other of said waist regions, said fastening elements being releasably attachable to said landing zone for attaching said waist regions together; and

antislip zones on the outer surface of said main portion in the other of said waist regions and on opposite sides of said landing zone, said antislip zones being contactable with predetermined areas of the inner surfaces of the proximal ends of said wing portions, when said wing portions are attached to said landing zone, to resist relative movement between the predetermined areas of the proximal ends of said wing portions and the other of said waist regions;

wherein the antislip zones comprise a mixture of elastic fibers made of a plastic elastomer and inelastic fibers made of a thermoplastic material.

12. The disposable diaper according to claim 11, wherein

a weight ratio of said elastic fibers and inelastic fibers in each said anti-slip zone is in a range of 8:2 to 5:5;

said mixture of said elastic fibers and inelastic fibers is bonded to a nonwoven fabric that defines the outer surface of said main portion in the other of said waist regions; and

a plastic ingredient of said non-woven fabric is exactly the same as that of said inelastic fibers.

13. A disposable diaper, comprising:

a main portion comprising a front waist region, a rear waist region and a crotch region extending in a longitudinal direction of said diaper between said front and rear waist regions, said main portion further comprising an inner surface adapted to face a wearer in use and an outer surface adapted to face away from the wearer in use;

a pair of wing portions extending outwardly in a transverse direction of said diaper from transversely opposite sides of said main portion in one of said waist regions, each of said

wing portions comprising an inner surface adapted to face the wearer in use and an outer surface adapted to face away from the wearer in use, each of said wing portions further comprising a distal end and a proximal end which is closer to the respective one of the transversely opposite sides of said main portion than the distal end;

fastening elements on the inner surfaces and at the distal ends of said wing portions, the proximal ends of said wing portions being free of said fastening elements;

a landing zone on the outer surface of said main portion in the other of said waist regions, said fastening elements being releasably attachable to said landing zone for attaching said waist regions together;

antislip zones on the outer surface of said main portion in the other of said waist regions and on opposite sides of said landing zone, said antislip zones being contactable with the inner surfaces of the proximal ends of said wing portions when said wing portions are attached to said landing zone; and

slip zones on the outer surface of said main portion in the other of said waist regions, each of said antislip zones being positioned in said transverse direction between one of the slip zones and the landing zone, said slip zones being also contactable with the inner surfaces of the proximal ends of said wing portions when said wing portions are attached to said landing zone;

wherein a kinetic friction coefficient between the antislip zones and the inner surfaces of the proximal ends of said wing portions is greater than that between the slip zones and the inner surfaces of the proximal ends of said wing portions; and

wherein each of the antislip zones comprises a fibrous mixture of elastic fibers and inelastic fibers.

14. The diaper of claim 13, wherein the wing portions are elastically stretchable in the transverse direction; and

when the inner surfaces of the proximal ends of the wing portions come into contact with the antislip and slip zones at first and second areas, respectively, the greater kinetic

friction coefficient exhibited by the antislip zones provides resistance to movement of the first area of said wing portions relative to the other of said waist regions, whereas the lower kinetic friction coefficient exhibited by the slip zones allows the second area of said wing portions to be stretchable in the transverse direction thereby enhancing fitting of the diaper around the wearer's waist.

15. The diaper of claim 14, wherein

the slip zones comprise said inelastic fibers and are free of said elastic fibers.

16. The diaper of claim 14, further comprising strip members attached to the transversely opposite sides of the main portion in the other of said waist regions, each said strip members comprising

a base body having a first region and a second region, said second region defining one of the slip zones; and

the fibrous mixture bonded to the first region but not to the second region of said base body, said fibrous mixture defining one of the antislip zones.

17. The diaper of claim 16, wherein

said base body, including said second region, comprises a non-woven fabric of the inelastic fibers and is free of said elastic fibers.

18. The diaper of claim 16, wherein each of the proximal ends of the wing portions comprises

a base elastic layer elastically stretchable in the transverse direction; and

a fibrous layer of inelastic fibers disposed on said base elastic layer to define the inner surface of said proximal end of the wing portion, said fibrous layer exhibiting the greater

kinetic friction coefficient with the fibrous mixture of the respective antislip zone than with the base body of the respective slip zone.

19. The diaper of claim 14, further comprising strip members attached to the outer surface of the main portion at the transversely opposite sides thereof in the other of said waist regions, each of said strip members defining one of the slip zones and one of the slip zones;

wherein the kinetic friction coefficient between the antislip zones and the first areas of the wing portions is greater than that between said first areas and the outer surface of said main portion in the other of said waist regions.

20. The diaper of claim 11, further comprising strip members attached to the outer surface of the main portion at the transversely opposite sides thereof in the other of said waist regions, each of said strip members defining one of the slip zones;

wherein a kinetic friction coefficient between the antislip zones and the predetermined areas of the proximal ends of said wing portions is greater than that between said predetermined areas and the outer surface of said main portion in the other of said waist regions.

21. The disposable diaper according to claim 18, wherein  
the elastic fibers have a fiber length of 5 to 100 mm and the inelastic fibers have a fiber length of 5 to 100 mm; and

a weight ratio of said elastic fibers and inelastic fibers in each said anti-slip zone is in a range of 8:2 to 5:5;

said base body is a nonwoven fabric; and  
a plastic ingredient of said non-woven fabric is exactly the same as that of said inelastic fibers.

**IX. EVIDENCE APPENDIX**

None

**X. RELATED PROCEEDINGS APPENDIX**

None